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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,575	05/03/2005	Patrice Bujard	SE/2-22792/A/PCT	4479

324 7590 06/07/2007
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EXAMINER	
PARVINI, PEGAH	
ART UNIT	**PAPER NUMBER**
1755	

MAIL DATE	DELIVERY MODE
06/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/533,575	BUJARD ET AL.	
	Examiner	Art Unit	
	Pegah Parvini	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-14,16,18 and 19* is/are pending in the application.

4a) Of the above claim(s) *3,4,15,17 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5,7-10,12-14,16 and 19* is/are rejected.

7)☒ Claim(s) *6,11,16 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

A number of claims had been considered as Allowable Subject Matter in the previous Office action; however, upon further consideration, the allowability of some of the claims have been withdrawn and a new ground of rejection has been set for them as indicated below.

Any rejection, made in the previous Office action, and not repeated below, are hereby withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

1. Claims 1-3, 5-9, 14, 16, and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Publication No. US 2005/0252410 to Bujard et al.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

2. With reference to claims 1,2, and 9, the prior art teaches particles of plane parallel structures of silicon/silicon oxide generally having a length of from 1 μm to 5 mm, a width of from 1 μm to 2 mm, and a thickness of from 20 nm to 2 μm and a ratio of length to thickness of at least 2:1 ([0003]). In addition, the prior art teaches a multilayered pigment flakes prepared by vapor deposition of a separating agent layer onto a movable carrier and then deposition of SiO_y layers which for one layer, $1.0 \leq y \leq 1.8$, for the other $0.7 \leq y \leq 0.99$, and for another $1.0 \leq y \leq 1.8$, and finally separating the $SiO_{0.70\text{-}0.99}/SiO_{1.0\text{-}1.8}/SiO_{0.70\text{-}0.99}$ particles from the solvent ([0130] to [0137]). The prior art, further disclose that the inner most layer can be substituted with Al metal in which the thickness is between 20 to 100 nm ([0086]). It is noted that the claims use the language of "optionally" having a layer "a". Thus, if layer "a" as claimed does not exist, then layers "b" and "c" would correspond to 'b2' and 'b3' as disclosed in [0133]-[0134] with 'b1' being the metal core made of Al.

3. With reference to claims 5, and 14, Bujard et al. disclose the thickness of layer (b) or SiO_x layer, which corresponds to the disclosed layer of 'b2' to be 50 to 400 nm ([0143]).

4. With reference to claims 7, 8, and 19, the prior art, as was explained in details for claim 1, discloses the vapor deposition process wherein the metal oxide is being

deposited on the carrier ([0086], [0130] to [0137]). It is, again, noted that the deposition and existence of SiO_y layer is indicated to be optional in step (c) of the claimed process.

5. With reference to claim 10, Bujard et al. disclose the use of the disclosed pigment in coatings, printing inks, and cosmetics ([0166]).

6. With reference to claim 12, Bujard et al. disclose a SiO_y layer wherein $1.0 \leq y \leq 1.8$, a second SiO_y layer, and a third SiO_y layer wherein for the third one $1.0 \leq y \leq 1.8$ ([0132]-[0134]).

7. With reference to claim 13, the reference discloses a thickness of especially 40 to 60 nm for the metal core ([0086]).

8. Claims 1, 2, 10, 12, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Publication No. US 2005/0287090 to Bujard.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

9. With reference to claims 1-2, and 9, Bujard teaches platelet-shaped pigments having a length of from 1 μm to 5 mm, a width from 1 μm to 2 mm, and a thickness of from 20 nm to 2 μm, and a ratio of length to thickness of at least 2:1 (paragraph [0001]). The prior art, also, disclose a metal core, especially aluminum (paragraph [0064]). Additionally, Bujard discloses the thickness of the core metal to be fro 20 to 100 nm ([0094]). Finally, Bujard teaches the vapor deposition of different SiO_{x1}, SiO_{x2} or SiO_{y1} layers wherein $0.03 \leq x1 \leq 0.7$, $0.7 \leq x2 \leq 0.99$, and $1.0 \leq y1 \leq 1.95$; furthermore, the reference discloses that other layers of SiO_{x1}, SiO_{x2}, or SiO_{y1} can be deposited on the previous layers (paragraphs [0064], [0087] to [0092]). It is noted that as claims 1 and 2, in part (b), recite, the SiO_x layer claimed, may be deposited on the core or on another silicon oxide layer. It is, further, noted that claims 1 and 2, in part (a), indicate that the first layer of silicon oxide, SiO_y as claimed, is optional.

10. With reference to claims 7-8, and 19, Bujard teaches the process of vapor deposition through which the silicon oxide layers are deposited; in addition, the reference discloses a core of Al for the disclosed multilayered pigment ([0094], [0101] to [0106]). It is noted that steps (c) and (e) are mentioned to be optional in the claims of the instant application.

11. With reference to claim 10, the prior art disclose that the pigment is used in paints, textiles, ink-jet printing, cosmetics, coatings, plastics, printing inks, in glazes for ceramics and glass, and in security printing (paragraph [0001]).

12. With reference to claim 13, Bujard discloses that the thickness of the Al core is from 20 to 100 nm ([0094]).

Response to Amendment

13. Applicants' amendments to the Specification and claim 7 by changing the spelling of the terms "aluminium" and "vapour" or its derivatives to the American English spellings, in pages 2-10, filed April 16, 2007 are acknowledged. As such, the objections to the specification regarding these mis-spellings set forth in the First Office action are withdrawn.

14. Applicants' amendments to claims 1 and 13 and cancellation of claims 3-4, 15, 17, and 20, in pages 9-10, filed April 16, 2007 are acknowledged. However, they are insufficient to overcome the rejections in light of new grounds of rejections, which are made in this Office action.

Response to Arguments

15. Applicant's arguments with respect to claims 1-2, 5, 7-10, 12-14, 16, and 19 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

16. Claims 6, 11, 16, and 18 are objected to as being dependent upon rejected claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fail to disclose a thickness for the first silicon oxide layer, SiO_y or layer 'a', in the multilayered platelet-shaped pigment. Additionally, the prior art fail to disclose a ratio for the oxygen to silicon in the second silicon oxide layer in which $0.05 \leq x \leq 0.5$.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent Publication No. 2005/0013934 to Xiong et al.

US Patent Publication No. 2003/0209169 to Andes et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegah Parvini whose telephone number is 571-272-2639. The examiner can normally be reached on Monday to Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PP

J. A. LORENGO
SUPERVISORY PATENT EXAMINER